



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,160	04/13/2004	Kiyokazu Ohtaki	27,702 USA	4547
23307	7590	10/17/2006	EXAMINER	
SYNNESTVEDT & LECHNER, LLP			YANG, CLARA I	
2600 ARAMARK TOWER			ART UNIT	
1101 MARKET STREET			PAPER NUMBER	
PHILADELPHIA, PA 191072950			2612	

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/823,160

Applicant(s)

OHTAKI ET AL.

Examiner

Clara Yang

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 and 17-23 is/are allowed.
- 6) ☒ Claim(s) 8-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 14, filed on 3 August 2006, with respect to the amendment of claim 1 have been fully considered and are persuasive. The 35 USC 102(b) rejection of claim 1 has been withdrawn, and claims 1 and 3-6 are allowable.
2. Applicant's arguments filed on 3 August 2006 with respect to claims 8-16 have been considered but are moot in view of the new ground(s) of rejection.
3. Applicant's arguments filed on 3 August 2006 have been fully considered but they are not persuasive.

In response to applicant's argument on page 15 that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a ferromagnetic body that prevents the generation of an eddy current in the decorative plating 40 of the decorative cap 32) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

4. Because the applicant does not traverse the examiner's assertion of official notice in the office action mailed on 3 May 2006 that ferromagnetic cores made of an amorphous magnetic body or ferrite are well known (see pages 7-8), the common knowledge or well-known in the art statement is taken to be admitted prior art.

Drawings

5. The drawings were received on 3 August 2006. These drawings are acceptable.

Claim Objections

6. Claim 1, 6-8, 13, 17, and 23 are objected to because of the following informalities:

Art Unit: 2612

- Claims 1, 7, and 17 - The claim limitations employ the phrases "for driving the actuator" and "for transmitting the transponder-driving radio wave". It has been held that the recitation that an element is "for" performing a function is not a positive limitation but only requires the ability to so perform.
- Claim 6 - The claim limitations employ the phrases "detecting that the transmittable area has moved to the position corresponding to the communication means". It has been held that the recitation that an element is "for" performing a function is not a positive limitation but only requires the ability to so perform.
- Claim 8 - The claim limitations employ the phrases "for driving the actuator", "for transmitting the transponder-driving radio wave," and "for amplifying the transponder-driving radio wave". It has been held that the recitation that an element is "for" performing a function is not a positive limitation but only requires the ability to so perform.
- Claim 13 - The claim limitations employ the phrases "for driving the actuator", "for transmitting the transponder-driving radio wave," and "for amplifying the transponder-driving radio wave". It has been held that the recitation that an element is "for" performing a function is not a positive limitation but only requires the ability to so perform. In addition, the comma between "ferromagnetic core" and "for amplifying" should be removed.
- Claim 20 - The claim limitations employ the phrases "detecting that the decorative member is separated from the communication means at a position ensuring the formation of the magnetic path". It has been held that the recitation that an element is "for" performing a function is not a positive limitation but only requires the ability to so perform.
- Claim 23 - The claim limitations employ the phrases "for driving the actuator", "for transmitting the transponder-driving radio wave," and "detecting that the decorative member has been removed from the case". It has been held that the recitation that an element is "for" performing a function is not a positive limitation but only requires the ability to so perform.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 8-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over McConnell et al. (US 6,181,025B1) in view of Satoh et al. (US 4,148,967) and further in view of Schweiger et al. (US 6,351,206).

Referring to claims 8, 10, 13, and 16, McConnell teaches a lock assembly 10 (i.e., a switch device) that is connected to a vehicle's ignition (i.e., actuator) and activates (i.e., drives) the ignition when an identification (ID) code received from a key's transponder matches a predetermined ID code of the vehicle's interrogator (i.e., vehicle controller) (see Col. 1, lines 20-42 and 66-67; and Col. 2, lines 1-14). McConnell teaches claim 8's first 3 limitations and claim 13's first and second limitations: (a) an ignition lock tumbler (not shown), which is an operation switch operated by a user to activate the ignition (see Col. 1, lines 66-67; Col. 2, lines 1-14; Col. 3, lines 52-60 and 65-67; Col. 4, lines 1-3; and Col. 5, lines 5-11); (b) bezel 20 (i.e., a decorative member) surrounding the ignition lock tumbler and having an ornamental surface formed by flat inner portion 26, rim 24, and the surface between flat inner portion 26 and rim 24 (see Fig. 1; and (c) interrogator-coil circuit 70 (i.e., a communication means) adjacent to bezel 20 and

Art Unit: 2612

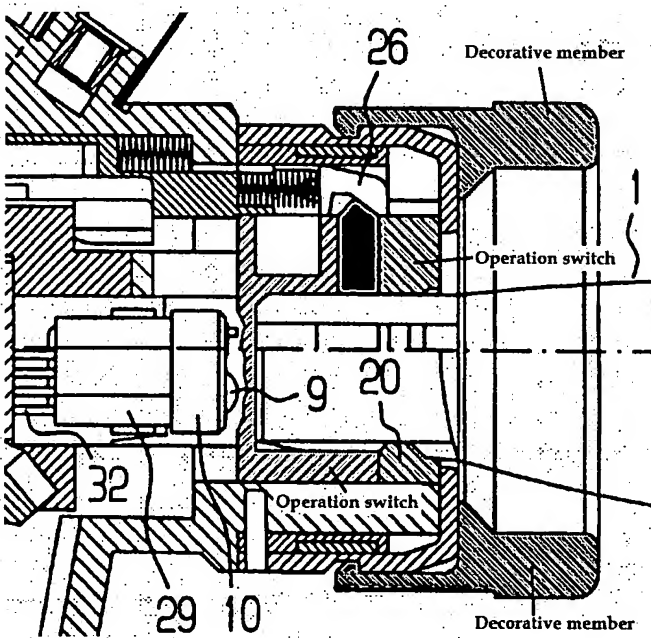
transmitting a transponder-driving radio wave that causes the key's transponder to generate electromotive force and transmit the ID code (see Col. 1, lines 28-42). As shown in Fig. 1, interrogator-coil circuit 70's antenna coil 80 is a flat spiral coil 80 formed on the surface of loop 82, wherein bezel 20's flat inner portion 26 holds loop 82 firmly in place against separator plate 34 (see Col. 4, lines 21-27, 42-46, and 66-67; and Col. 5, line 1). With respect to claim 13's third limitation concerning the communication means, as shown in Fig. 1, interrogator-coil circuit 70 (i.e., communication means) is spaced from bezel 20 via a portion of the T-shaped circuit board's upright leg (see Col. 4, lines 54-65). McConnell, however, omits teaching that (1) bezel 20's exposed portion has an ornamental surface that is furnished with decorative plating (as called for in the second limitations of claim 8 and 13); (2) a ferromagnetic body is arranged between interrogator-coil circuit 70 and bezel 20 (as called for in claim 8's fourth limitation); (3) interrogator-coil circuit 70 includes a ferromagnetic core with antenna coil 80 wound around it (as called for in claim 13's third limitation); and (4) the ferromagnetic core is made of an amorphous magnetic body or ferrite (as called for in claims 10 and 16).

In an analogous art, Satoh teaches that a combination of chemical plating and electrical plating are widely used for interior and exterior decorative articles in vehicles (see Col. 1, lines 12-24 and 32-48). Per Satoh, plastic molded products on which aluminum is vacuum-deposited are used as various interior decorative articles in vehicles (see Col. 1, lines 43-51).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify McConnell's bezel 20, which is a decorative article molded of high-impact plastic (see Col. 3, lines 44-51), as taught by Satoh because subjecting bezel 20's surface to a surface metallizing treatment (i.e., decorative plating) results in a beautiful interior decorative article (see Satoh, Col. 1, lines 32-42).

McConnell and Satoh, however, are silent on (1) a ferromagnetic body being arranged between interrogator-coil circuit 70 and bezel 20 (as called for in claim 8's fourth limitation); (2) interrogator-coil circuit 70 including a ferromagnetic core with antenna coil 80 wound around it (as called for in claim 13's third limitation); and (3) the ferromagnetic core being made of an amorphous magnetic body or ferrite (as called for in claims 10 and 16).

In an another analogous art, Schweiger teaches a lock 7 that enables a vehicle's ignition (i.e., actuator) is be started (i.e., driven) when an ID code transmitted by key 1's transponder matches a predetermined ID code of the vehicle's control and evaluation unit 11 (see Col. 3,



lines 56-67; Col. 4, lines 1-6 and 14-26; and Col. 6, lines 57-59). Schweiger's lock 7, as shown in Figs. 1-3 and in more detail in the figure on the left, includes (a) an operation switch, which includes receptacle 8 and is operated by an operator for starting the ignition (see Col. 3, lines 46-55; Col. 4, lines 4-67; and Col. 5, lines 1-7), (b) a decorative

member surrounding the operation switch, and (c) communication means 29 spaced from the decorative member and formed by lock-side receiver 9 and lock-side coil 10, which is wound around a ferromagnetic core, wherein communication means 29 transmits a transponder-driving radio wave that causes key 1's transponder to transmit its ID code, and the ferromagnetic core amplifies transponder-driving radio wave by increasing the magnetic field density (see Col. 3, lines 49-67; Col. 4, lines 1-6 and 14-26; Col. Col. 5, lines 35-43 and 55-59; and

Art Unit: 2612

Col. 6, lines 43-48 and 57-60). Schweiger omits specifying that the ferromagnetic core be made of an amorphous magnetic body or ferrite. Because the applicant does not traverse the examiner's assertion of official notice in the office action mailed on 3 May 2006 that ferromagnetic cores made of an amorphous magnetic body or ferrite are well known (see pages 7-8), the common knowledge or well-known in the art statement is taken to be admitted prior art. Hence it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Schweiger's ferromagnetic core such that it is made of an amorphous magnetic body, because an amorphous magnetic body has a lower melting point than pure iron and can be easily formed into a ring by injection molding or compression forming.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the McConnell and Satoh's interrogator-coil circuit 70 as taught by Schweiger because disposing a ferromagnetic core inside antenna coil 80 increase the magnetic field density, thereby substantially reducing the amount of current required to generate the magnetic field (see Schweiger, Col. 5, lines 55-59). When the ferromagnetic core is inside antenna coil 80, the ferromagnetic core is arranged between interrogator-coil circuit 70 and bezel 20, as called for in claim 8, and isolated from interrogator-coil circuit 70 via housing 30's surface 44, which is made of plastic (see McConnell, Col. 3, lines 52-64); thus negative effects between interrogator-coil circuit 70, coil 80, and the ferromagnetic core, are reduced.

Regarding claim 9, McConnell teaches that interrogator-coil circuit 70 includes antenna coil 80, which has an inner circumferential surface, as shown in Fig. 1 (see Col. 4, lines 10-20). By modifying McConnell's interrogator-coil circuit 70 as taught by Schweiger, the ferromagnetic core is arranged along antenna 80's inner circumferential surface.

Regarding claim 11, as explained in the previous rejection of claim 9, McConnell's interrogator-coil circuit 70 includes antenna coil 80.

Regarding claim 12, as shown in Fig. 1, McConnell's antenna coil 80 and the ignition lock tumbler, which fits snugly in rear recess 40, is arranged such that antenna coil 80's central axis and the ignition lock tumbler's central axis substantially coincide with each other (see Col. 3, lines 33-39 and 52-60).

Regarding claim 14, as shown in Fig. 1, McConnell's lock assembly 10 further includes a case formed by housing 30 and rear cover 50 (see Col. 3, lines 52-67). McConnell's bezel 20 (i.e., decorative member) snaps onto housing 30's front flange 36, and interrogator-coil circuit 70 is arranged onto housing 30's rear flange and covered by rear cover 50 (see Col. 4, lines 54-67 and Col. 5, lines 1-4).

Regarding claim 15, as shown in Fig. 1, McConnell's interrogator-coil circuit 70 and ignition lock tumbler (not shown) are arranged along a single central axis (see Col. 3, lines 33-39 and 52-60); thus interrogator-coil circuit 70's central axis and the ignition lock tumbler's central axis substantially coincide with each other.

Allowable Subject Matter

10. Claims 1-7 and 17-23 are allowed.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

Art Unit: 2612

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clara Yang whose telephone number is (571) 272-3062. The examiner can normally be reached on 9:00 AM - 7:30 PM, Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (571) 272-7308. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CY
2 October 2006

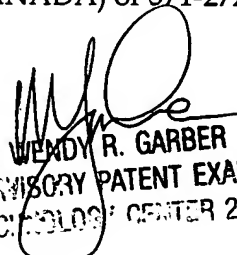

WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
ELECTRONIC BUSINESS CENTER 2600

Fig.1

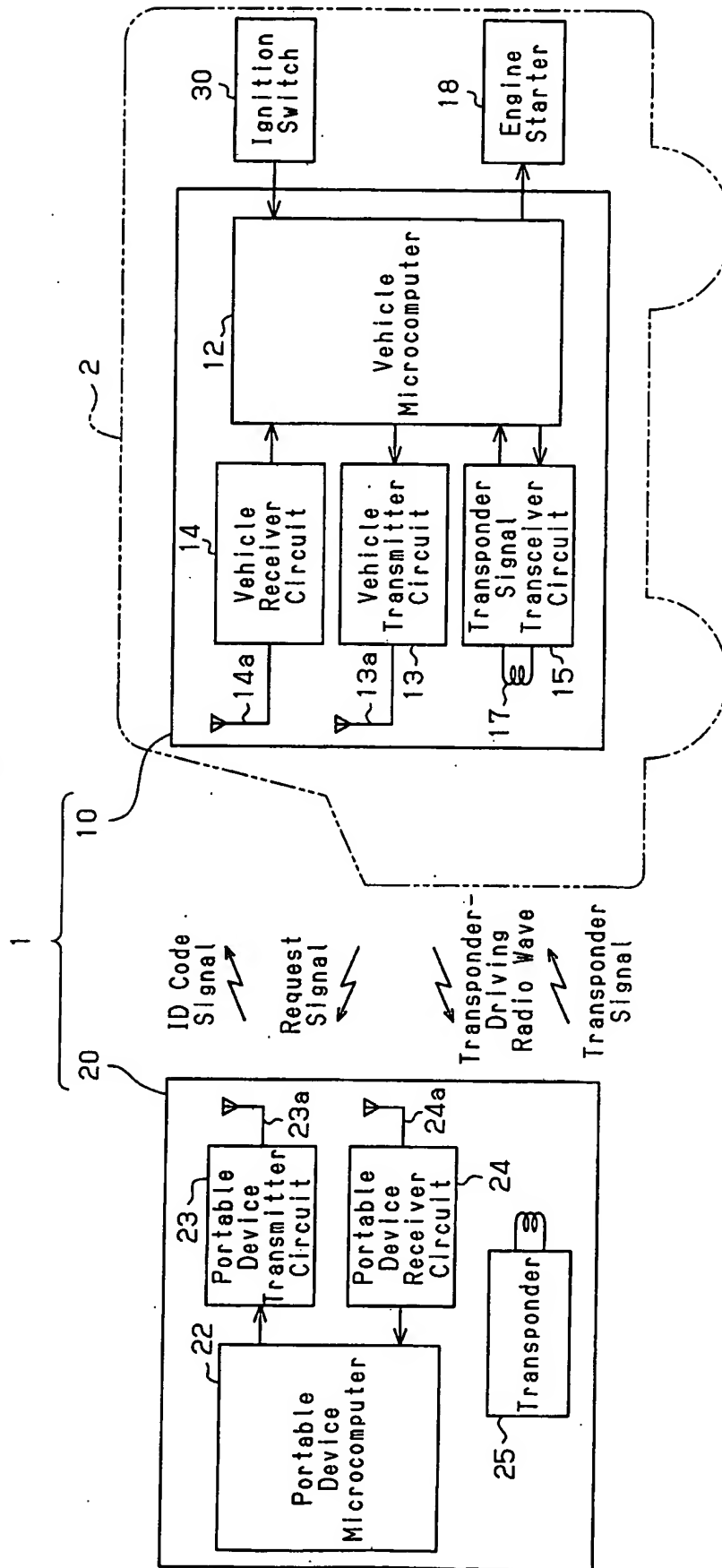


Fig. 2 is a schematic diagram of a circular component. The central area is labeled "ENGINE START STOP". The innermost ring is labeled 31. The next ring is labeled 17. The outermost ring is labeled 32a. The entire circular structure is labeled 3. The outer edge of the component is labeled 3a.

Fig.3

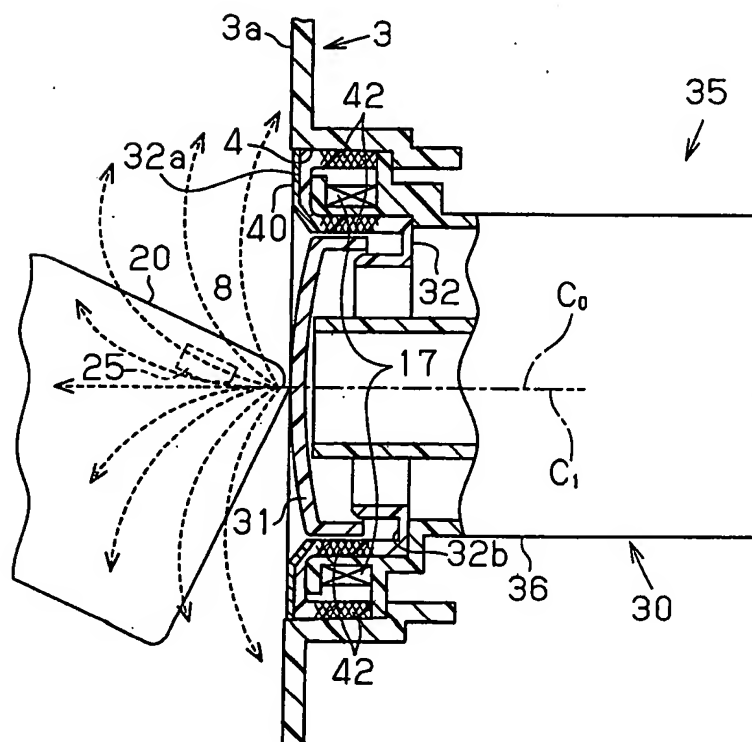


Fig.4

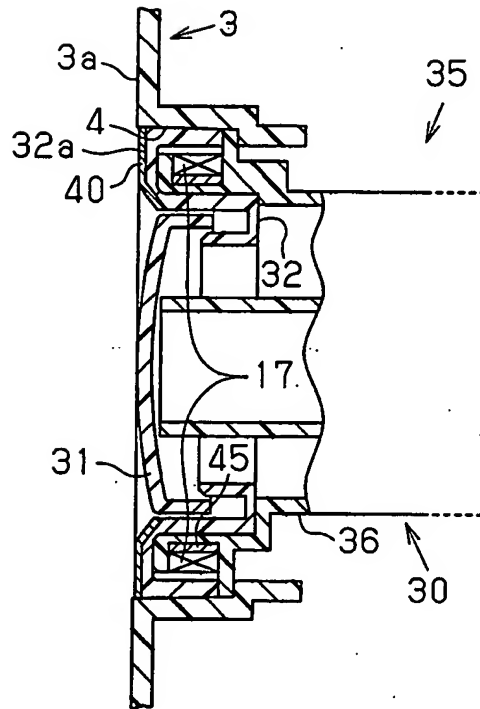


Fig.5

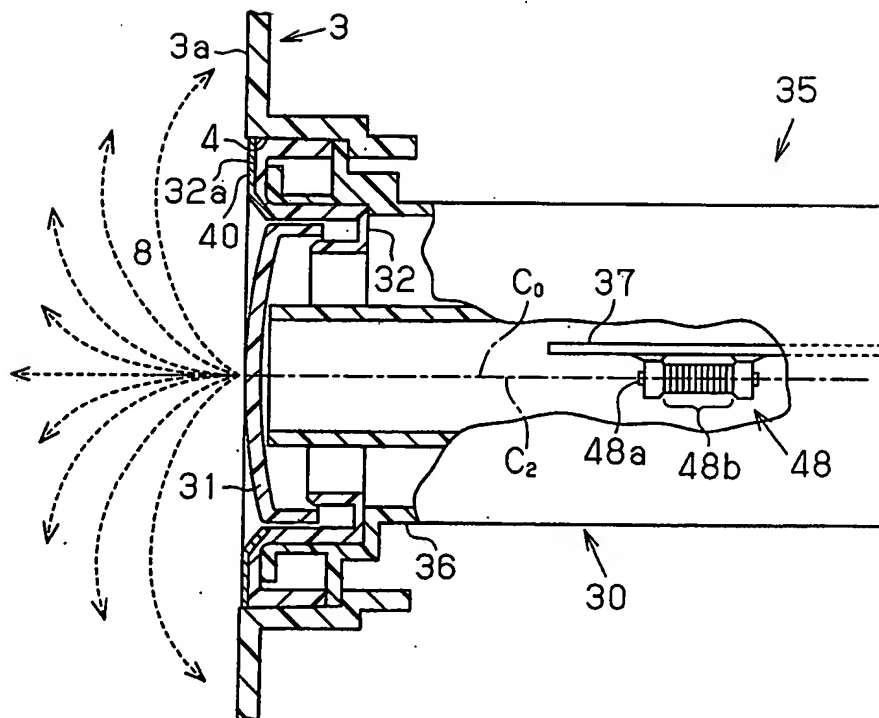


Fig. 6

